

EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

**DATE: June 13, 2001
2001-12-51**

Transmitted as follows is emergency airworthiness directive (AD) 2001-12-51, for the attention of all owners and operators of Boeing Model 737-800 series airplanes.

Background

The FAA has received a report indicating that severe vibration of the horizontal stabilizer occurred on a Boeing Model 737-800 series airplane. The airplane was operating at an altitude of 23,000 feet and an airspeed of 320 knots indicated airspeed (KIAS). This high frequency vibration was initiated by deployment of the speedbrakes during flight; it continued unabated for approximately 40 seconds, even though the speedbrakes were retracted.

Results of post-event analysis and investigation indicate that the type of vibration of the elevator and elevator tab assembly following deployment of the speedbrakes, if not corrected, could result in severe damage to the horizontal stabilizer, followed by loss of controllability of the airplane.

FAA's Conclusions

In light of this information, the FAA finds that certain new limitations should be included in the FAA-approved Airplane Flight Manual (AFM) for Model 737-800 series airplanes to prohibit operating the airplane at speeds in excess of 300 KIAS with speedbrakes extended. The FAA has determined that an airspeed of 300 KIAS provides an acceptable safety margin compared to the 320-KIAS airspeed at which the severe vibration occurred.

Other Similar Models

Operators should note that Model 737-600, -700, -700C, and -900 series airplanes are not included in the applicability of this AD. Existing analysis and flight testing data have not shown that Model 737-600, -700, and -700C series airplanes are subject to this severe vibration. Modified elevator tabs have already been installed on Model 737-900 series airplanes.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of this same type design, this airworthiness directive is issued to require revising the AFM to prohibit operating the airplane at speeds in excess of 300 KIAS with speedbrakes extended. This AD also provides for optional terminating action for the AFM revision.

Interim Action

This AD is considered to be interim action. The specific details of the modification discussed previously are being developed, but are not yet available for dissemination to affected operators. Once the modification of the elevator tab assembly discussed previously is developed, approved, and available, the FAA may consider further rulemaking.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this AD effective in less than 30 days.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this AD.

Applicability: All Model 737-800 series airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure that the flight crew is advised of the potential hazard associated with extending the speedbrakes at speeds in excess of 300 knots indicated airspeed (KIAS), accomplish the following:

(a) Within 24 clock hours after receipt of this AD, revise the Limitations Section of the FAA-approved Airplane Flight Manual (AFM) to include the following information. This may be accomplished by inserting a copy of this AD into the Limitations Section of the AFM.

“Do not operate the airplane at speeds in excess of 300 KIAS with speedbrakes extended.

WARNING: Use of speedbrakes at speeds in excess of 320 KIAS could result in a severe vibration, which, in turn, could cause extreme damage to the horizontal stabilizer.”

(b) Modification or retrofit of the elevator tab assembly in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, constitutes terminating action for the AFM revision required by paragraph (a) of this AD. Following such modification or retrofit, that AFM revision may be removed from the AFM.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Operations or Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(d) AD 2001-12-51, issued on June 13, 2001, becomes effective upon receipt.

For further information contact: Nancy H. Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2028; fax (425) 227-1181.

Issued in Renton, Washington, on June 13, 2001.

Original signed by:

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.